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PROPOSED 115-KV TRANSMISSION LINE FROM TROY TO MOUNT VERNON MINE

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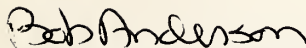
FINAL ENVIRONMENTAL IMPACT STATEMENT
**PROPOSED 115-kV TRANSMISSION LINE
FROM TROY TO MOUNT VERNON MINE**

Prepared by

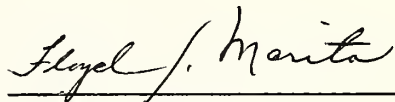
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December 1978



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MONTANA DEPARTMENT OF NATURAL RESOURCES & CONSERVATION

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DNRC
Ted J. Doney, Director

December 27, 1978

Transmitted herein is the Final Environmental Impact Statement: Proposed 115-kV Transmission Line from Troy to Mount Vernon Mine. Because the draft environmental impact statement (EIS), distributed in September 1978, contains information essential to this final EIS, the draft EIS is considered to be part of this final document.

Included in the final EIS are the recommendations of the Department of Natural Resources and Conservation (DNRC) to the Board of Natural Resources and Conservation regarding the proposed line, corrections to the draft EIS, and comments received on the draft EIS along with DNRC's responses.

Comments on the final EIS will be accepted until January 26, 1979, allowing 30 days for review from the date of transmittal to the Governor and the Environmental Quality Council (EQC). The Board of Natural Resources and Conservation will not take action on the transmission line application prior to expiration of the comment period.

This final EIS was prepared in compliance with the Montana Environmental Policy Act, Section 69-6504(b)(3), R.C.M. 1947, and the Montana Major Facility Siting Act, Section 70-801 et seq., R.C.M. 1947, and was transmitted to the Governor and EQC on December 27, 1978.

Sincerely,

Wayne A. Wetzel

WAYNE A. WETZEL
ENVIRONMENTAL COORDINATOR

WAW/nj
Enclosure



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PART ONE

RECOMMENDATIONS

The Montana Environmental Policy Act (MEPA) requires that a final environmental impact statement (EIS) such as this contain a summary of the study's conclusions. The Montana Major Facility Siting Act (MFSA) requires that the Department of Natural Resources and Conservation (DNRC) include in its final EIS its recommendations regarding the application. In compliance with both of these acts, this final EIS contains conclusions in the form of recommendations, as follows.

RECOMMENDATION I

The Department of Natural Resources and Conservation (DNRC) recommends to the Board of Natural Resources and Conservation that the applicant, Northern Lights, Inc., be granted a certificate of environmental compatibility and public need to build a 115-kV transmission line from the Troy Substation to the proposed ASARCO Mount Vernon Mine, following the applicant's preferred route as described on p. 73 of the draft EIS. (The draft EIS referred to throughout this report is *Draft Environmental Impact Statement: Proposed 115-kV Transmission Line from Troy to Mount Vernon Mine*, released in September 1978 by DNRC and the U.S. Forest Service, Kootenai National Forest.)

Specifically, the applicant's preferred route is defined as a strip of land 300 m (983 ft) in width extending 150 m (492 ft) on either side of a line which coincides with the applicant's 12.47-kV distribution line from the Troy Substation to the beginning of a proposed all-weather road south of Little Joe (point O, figure 9, p. 67 of draft EIS) and follows the route of this proposed all-weather road to the proposed Mount Vernon mill site. The centerline eventually chosen for the right-of-way must fall within this strip of land but need not coincide with the centerline of the corridor described above.

Justification: A voltage rating of 115 kV is the optimum voltage of this line, for two reasons. First, although a 69-kV line (which does not require a certificate under the Montana Major Facility Siting Act and would not have to be constructed using a route, centerline, and construction guidelines approved by the Board) would adequately serve the ASARCO load, the power source at the Troy Substation is 115 kV;

the step-down transformation required to serve a 69-kV line from this substation would cost \$200,000. Because 69-kV construction would cost \$10,000 less than 115-kV construction over the length of the line, the net additional cost of a 69-kV line would be \$190,000. While the Bonneville Power Administration (BPA) plans to reconstruct the 115-kV line serving the Troy Substation as a double-circuit 230-kV line, one of the circuits will remain at 115 kV at least until the late 1990's (Rodewal 1978); therefore, no step-down transformation would be required for the proposed line at the time of conversion. Second, line losses and transformation losses would be greater for a 69-kV line.

The applicant's preferred route conforms to the Board's adopted policy of using existing rights-of-way wherever appropriate. In addition, the applicant's preferred route, of all alternative routes, would cause the least amount of adverse environmental impact, as discussed in chapter 5 ("Evaluation of Alternative Routes") of the draft EIS and summarized on pp. 4 and 5 of the draft EIS. Examination of table 5 in the draft EIS (p. 66) shows that, of the ten areas of concern shown in the table, the applicant's preferred route ranks best for two and worst for four, while the DNRC western alternative ranks best for five and worst for two. To DNRC, however, the most important considerations were the length of possible underbuild replacing the existing 12.47-kV distribution line and the amount of forest clearing required for the new right-of-way. For both these concerns, the applicant's preferred route ranks best and the DNRC western alternative ranks worst of the five routes considered.

RECOMMENDATION II

DNRC recommends that, should the Board decide to adopt recommendation I above and issue a certificate of environmental compatibility and public need, the certificate issued be subject to seven conditions.

Condition 1. A time limit shall be placed on the certificate such that the certificate expires on June 30, 1982; if line construction is not completed by that date, the applicant must obtain from the Board an amended certificate before construction can proceed.

Justification: If the Mount Vernon Mine load does not come on line before July 1, 1982, then power to serve ASARCO must be procured by the applicant from sources other than BPA. In that case, as discussed on pp. 42, 43, and 81 of the draft EIS, the impacts of the proposed facility would differ considerably from those discussed in the draft EIS. If the applicant's BPA allocation would not be sufficient to serve the ASARCO load, then that load would have to be served from other, more expensive sources, increasing the average cost of power to the applicant. Unless the rate structure negotiated between the applicant and ASARCO would provide that ASARCO pay the full incremental costs, the cost of power for all of the applicant's customers would increase. This impact cannot be predicted at the present time and would require examination by the Board if it should arise.

Condition 2. The applicant shall submit and the Board shall review, modify if necessary, and approve a set of detailed construction guidelines and a detailed plan and profile of the proposed facility before construction begins.

Justification: Many of the potential impacts of this project can be mitigated by proper pole placement and construction techniques.

Condition 3. The applicant's existing 12.47-kV distribution line, including poles, from the Troy Substation to the beginning of the proposed all-weather road (point 0, figure 9, draft EIS) shall be removed and replaced with a 29.47-kV distribution line underbuilt on the 115-kV transmission structures.

Justification: The primary advantage of the recommended route over all others is that it provides maximum opportunity for using an existing right-of-way and for reducing the number

of structures by underbuilding the distribution line (table 5, p. 66, draft EIS). This advantage would be lost if the distribution line were not underbuilt on the transmission structures.

Condition 4. Engineering specifications shall conform to Rural Electrification Administration (REA) specifications as set forth in REA Bulletin 62-5 (July 1976), in which conductor size "Partridge" is specified.

Justification: REA will lend money only for facilities that meet its guidelines, which are designed to promote safety and economy.

Condition 5. If radio or television interference is caused by the operation of the proposed 115-kV line, the applicant shall initiate appropriate modification of the receiving antenna system, repair loose or damaged hardware, or take other actions necessary to restore present levels of television and radio reception. Those present levels shall be determined by the Department of Natural Resources and Conservation as part of its centerline analysis.

Justification: It would be inappropriate for residents of the area to suffer a reduction in the quality of their radio and television reception because of the operation of the line; such interference can be easily rectified.

Condition 6. Herbicides shall not be used during right-of-way clearing or maintenance.

Justification: Adherence to this condition would avoid ecological damage and prevent possible contamination of the Lake Creek municipal water supply.

Condition 7. If fiberglass crossarms are to be used on the line, they shall be used with full line insulation.

Justification: Recent research has shown that the fiberglass coating of such crossarms used without full line insulation undergoes progressive deterioration with exposure to pollution, ultraviolet radiation, and leakage currents from the line. This deterioration could lead to arcing and line faults (see letter of October 27, 1978, from Shah and Associates to DNRC, included in appendix A). Corona discharge and visible light production also increase as the fiberglass coating deteriorates, and although these phenomena are not dangerous, they have led in the past to complaints from nearby residents and motorists (Shah 1978).

PART TWO PUBLIC COMMENTS ON THE DRAFT EIS

PUBLIC MEETINGS

DNRC conducted two public meetings for the purpose of obtaining statements from individuals and groups regarding the application and the draft EIS. The first meeting, held in Troy on October 10, 1978, was attended by approximately thirty persons, thirteen of whom presented oral statements. The second meeting, held in Noxon on October 11, 1978, was attended by approximately twenty persons, five of whom presented statements. In addition, James A. Sewell, representing the applicant, and a representative of the U.S. Forest Service were present at both meetings. The participants at the meetings are listed in appendix B.

Most of the citizens who commented at the meetings were opposed to the proposed transmission line, the ASARCO Mount Vernon Mine, or both. Few people at the Troy meeting made specific comments on the routing of the line; none at the Noxon meeting offered such comments. Several landowners in the Lake Creek Valley expressed a preference for the DNRC western alternative as shown in figure 9 of the draft EIS because it would be shorter and would pass near fewer residences than any other alternative. However, a landowner near segment D of the DNRC western alternative expressed opposition to another powerline west of Freeman Ridge. Two persons favored a route leading

north from Cabinet Gorge Dam because few residences are there and because they felt there would be less need for the proposed Kootenai Falls Dam if Washington Water Power supplied power from Cabinet Gorge, rather than the applicant supplying it. One of these persons later expressed second thoughts about the route, since it would have a great visual impact. Many landowners expressed concern about the possible health effects of a line passing near homes. Many people said that public notice of the draft EIS and public hearing were inadequate, and several requested an extension of the comment period. Many people noted that an informational meeting held well before the public comment meeting would have been helpful.

There was much concern at the Troy meeting over the timing of the coming on line of the Mount Vernon Mine load, the ability of BPA to provide power, and the possible connection between the proposed Kootenai Falls Dam and the proposed line. Also, many were concerned about the financial arrangements between the applicant and ASARCO and about the effect that these arrangements would have on their electricity rates. Several people asked that the line be buried to keep it out of sight. Responses to specific comments are given under "Response to Public Comment" below.

WRITTEN COMMENTS

In addition to comment obtained at the public meetings, thirteen letters of comment were received by DNRC through the public comment period: eight from the general public, two from the Montana Department of Fish and Game, one from the Town of Troy, one from the U.S. Department of Agriculture's Soil Conservation Service, and one from the applicant's consulting engineer. These letters are reproduced in appendix C.

In general, the letters expressed the same concerns aired at the public meetings, including the possibility of a connection between the ASARCO load and the need for the proposed Kootenai Falls

Dam, the possibility that the line would encourage development of other ore bodies, and the possible effects on power rates of the repayment arrangements between the applicant and ASARCO. Three letters expressed opposition to the ASARCO Mount Vernon Mine, and another expressed opposition to the proposed Kootenai Falls Dam. Two letters opposed any new powerline. Only four letters other than the one from the applicant's engineer suggested specific routes for the proposed line: two supported DNRC alternative D, one supported a line from Cabinet Gorge Dam, and one supported a route including segment A-B-D-E-F, shown in figure 9 of the draft EIS.

RESPONSE TO PUBLIC COMMENT

Each significant comment that appeared in one or more of the letters received by DNRC or was raised at one of the public meetings is printed in bold

type in the left column below, followed in the right column by DNRC's response.

GENERAL COMMENTS

The Montana Department of Fish and Game commented that there was apparently no field inspection by DNRC of the several routes considered in the draft EIS.

All routes were examined in the field by one or more DNRC employees; virtually all roadless parts of the routes were examined on foot, the major exception being segment T shown on figure 9 of the draft EIS, which was examined from the Spar Lake Road. Most portions of the routes were examined three to five times, and by more than one staff member. Existing information was spot checked where accurate information was considered essential for evaluation of the project.

The coordinator of the Cabinet Resources Group requested a fifteen-day extension of the public comment period, stating that copies of the draft EIS were requested but not received by October 8, 1978

Forty copies of the draft EIS were shipped by bus to the Cabinet Resources Group in Troy on September 14, 1978, three days after the report was received from the printer. A member of the group in Troy was contacted and asked to pick up the reports and deliver them to the other members. The request for a fifteen-day extension could not be granted because insufficient time remained before DNRC's legal deadline for making its recommendation.

While constructing 115-kV transmission lines near distribution lines, workers should conform to all safety requirements of state, federal, and county agencies.

DNRC agrees.

Would the applicants pay full market value for land required for the right-of-way?

The acquiring of any new right-of-way would be subject to negotiation between the applicant and the landowner. The applicant has the power of eminent domain; if it must be exercised, the amount of reimbursement would be decided through legal proceedings.

Would linear inductance be a problem where the line runs parallel to a pipeline?

No such problem is envisioned with a line of this voltage.

The makeup of the work crews was questioned. The application (draft EIS, p. 89) apparently states that the ratio of supervisors to laborers would be 2:1.

The work force for the project would include approximately thirty individuals. Of these, twenty would be technical personnel (including linemen and three or four supervisors) who would probably come into the area from out of state; the remaining ten, the ground crews, would probably be hired locally.

NEED AND SYSTEMS ALTERNATIVES

The additional 7.2 km (4.5 mi) of transmission line from Kootenai Falls to the Troy Substation were not considered by DNRC as part of this project.

If the Mount Vernon Mine load were to come on line after July 1, 1982, and if BPA could not provide the applicant with the power necessary to supply that load, then the proposed transmission line would become directly linked with the need for the proposed Kootenai Falls Project.

The proposal made by the applicant is to serve the proposed ASARCO mine and concentrator from the Troy Substation, using power purchased from BPA if available; the application does not include a segment from Kootenai Falls to the Troy Substation. There is no certainty that this project would lead to the construction of Kootenai Falls Dam. Under certain conditions, as discussed in the draft EIS, the project would shorten the amount of time before the applicant is forced to find other sources of power. DNRC did not think this possibility sufficient to include the proposed Kootenai Falls Project or its associated facilities, such as the 7.2 km (4.5 mi) of transmission line, as a part of this project.

The proposal to build the Kootenai Falls Project is being made by the applicant and seven partners, all of whom are subject to the notice of insufficiency sent out by BPA (the notice of insufficiency is reproduced in appendix D). Each of these utilities perceives a need to secure generation of its own to serve future load growth which may not be provided by BPA. The applicant's share of the proposed project's output would be one-fourth, approximately 12 average MW. Assuming continuation of past growth rates, the applicant will need energy sources besides BPA by around 1987 even if the Mount Vernon Mine load does not come on line, and immediately after the date of insufficiency in 1983 if the mine load were to come on line before that date (whether or not it would be fully served by BPA); the other partners to the Kootenai Falls Dam proposal will need to find power sources other than BPA at varying dates after July 1, 1983. The logical connection between the proposed Mount Vernon Mine and the applicant's need to pursue the proposed Kootenai Falls Project (or other power sources besides BPA) is that the mine load may cause the applicant to seek other sources a few years earlier than otherwise; when the mine load will come on line, or whether it ever does, will have no effect on the generation needs of the other partners to the Kootenai Falls Dam proposal.

Additionally, a large number of public utilities are subject to the same pressure as the applicant to find generation sources other than BPA to serve their future load growth. Around one-third of the 115 preference customers of BPA will need power in addition to their BPA allocation immediately after the date of insufficiency. DNRC feels that the proposed Kootenai Falls Project will have to be addressed on its own merits rather than as an associated facility of the Mount Vernon Mine or of the proposed transmission line.

It was suggested that no decision be made on the line until the date the ASARCO load will come on line has been determined, since this will determine in part the need for the proposed Kootenai Falls Project and thus affect the overall impact of the proposed line.

If power to serve the ASARCO load were obtained from Washington Water Power via Cabinet Gorge, there would be no direct link between the Mount Vernon Mine and the need for the proposed Kootenai Falls Dam; hence, this option is preferable to the proposed line.

One letter stated that DNRC was remiss in addressing impacts of the line only and not the need for and impacts of the proposed Mount Vernon Mine as well.

DNRC did not adequately consider the no-action or no-build alternatives.

As stated above, denial of this transmission line application, or delay in making a decision on the application, would not necessarily affect the applicant's ability to serve the load, since a 69-kV line could be built without a certificate under the Major Facility Siting Act. However, DNRC's recommendation to the Board (p. 2) is to put a time limit on the certificate, requiring that the line be completed by July 1, 1982. If the decision to build the line were delayed, then the applicant would have to return to the Board for an amendment to the certificate and the question would be considered again.

The southern source was considered and rejected in the draft EIS because it would require a longer transmission line with greater environmental impact. As discussed above, DNRC feels that this option would have little or no impact on the question of the desirability of or need for Kootenai Falls Dam.

The draft EIS states on p. 20:

The need for the proposed ASARCO Mount Vernon Mine could not legally be considered by DNRC as an aspect of need for the proposed transmission line since (1) statutory authority for that consideration is not given DNRC by the Major Facility Siting Act and (2) the right to mine is granted ASARCO by the Mining Law of 1872, provided state and federal regulations are met. Thus, the need for copper and the potential profitability of ASARCO's mining venture were aspects of need not considered in this report.

As mentioned in the draft EIS (p. 27), "no action" is not an alternative available to the Board, since the Board is required by law to act on the application. The action recommended by DNRC is the granting of a certificate so that the applicant can construct its proposed 115-kV line. As was stated on p. 27 of the draft EIS, the denial of a certificate would not necessarily result in "no action" because that would not mean that the line would not be built; the load could be served by a 69-kV line, although at higher cost because of the additional transformers that would be required, and 69-kV lines are not regulated under the Major Facility Siting Act. Similarly, the no-build alternative would not necessarily mean that the mine could not open, although the costs of building and operating on-site diesel generation would be considerably higher than the cost of purchased power (see p. 27 of the draft EIS). In addition, the no-build alternative would do nothing about the present impacts of the existing distribution line.

Since the thermal capacity of the line is three to four times the load for the mine, would the extra capacity encourage the development of other mining claims such as the Ross Point, Stan Gulch, and Chicago Peak holdings?

The applicant's need for additional generation facilities (such as the proposed Kootenai Falls Project) to serve the ASARCO load increases with the potential for development of other ore bodies.

Would the existing 12.47-kV distribution line be adequate to serve ASARCO? If not, why?

DNRC should determine the long-term costs of maintenance and pole replacement on the existing distribution line, since the comparative desirability of underbuilding cannot be determined without these critical cost figures.

As stated in the draft EIS (p. 23), the applicant's choice of voltage makes sense on economic grounds, because of the savings on transformer investment. It is possible that the extra capacity might be utilized in further development in the area, though it seems unlikely that the savings from not having to construct additional transmission facilities would tip the balance in the decision of whether to develop other ore bodies. The cost of developing the Mount Vernon ore body, for instance, is approximately \$70 million, compared to just over \$1 million to build the proposed line. Furthermore, if such developments are likely to take place, the Major Facility Siting Act encourages applicants to plan for them by constructing ahead of demand to reduce the need for duplicate facilities.

It is true that increasing loads create a need for increased generating resources. The possible development of other ore bodies would create a host of impacts that would be beyond the scope of this EIS.

No. The conductor size on the existing distribution line is 1/0 ASCR. At 12.47 kV, the carrying capacity of this line is at most 5.5 MVA, roughly 25 to 30 percent of that necessary to carry the mine and plant load, with no allowance for customer loads already on the line.

It is true that the long-term maintenance and pole replacement costs must be known in order to calculate the financial desirability of underbuilding, but it is also true that other factors are even more critical than these costs. For instance, typical maintenance schedules show that in the first fifteen years of the life of a line there is almost no pole replacement; in the next five years about 5 percent will have to be replaced; and in the period twenty to twenty-five years after construction around 25 percent will have to be replaced. After that, it is best to replace the entire line. The existing distribution line is now twenty-eight years old. If the proposed line is not built, *all* poles of the existing line will probably be replaced within the next two or three years. In addition, if the existing line were not underbuilt and the proposed transmission line were built along a different route, the costs of clearing the new right-of-way and of maintaining two separate rights-of-way would have to be added to the project costs.

Several people commented that the possibility of constructing the proposed line underground in order to keep it out of public view had not been given adequate consideration in the draft EIS, and that DNRC should obtain cost figures for underground construction.

Although telephone and low-voltage distribution lines are often built underground, underground construction is generally not economically feasible for power transmission lines. As voltage rating increases, the cost of underground construction increases exponentially, and the risk of impact to resources such as soils and water may also increase. Technology for underground transmission lines has been proven feasible only for lower voltages. In fact, as of June 30, 1976, only .5 percent of all 115-kV lines are underground, and only 47 km (29 mi) of underground 115-kV construction is planned from 1979 to 1982 (FPC 1977). Thus, accurate cost estimates for 115-kV underground construction are not available.

IMPACTS ON VEGETATION

Concern was expressed that herbicides would be used to clear or maintain the right-of-way.

According to the applicant, no herbicides would be used on this project (draft EIS, p. 35). The right-of-way would be cleared by mechanical means. DNRC has recommended that this be made a condition of the certificate of environmental compatibility and public need (see p. 2).

IMPACTS ON SOCIOECONOMIC ATTRIBUTES

Many landowners expressed concern about possible human health hazards and radio-television interference associated with electromagnetic fields surrounding the proposed 115-kV line.

DNRC anticipates that the project will have no impact on radio and television reception (see pp. 43 and 50 of the draft EIS). However, to protect the quality of reception in the Lake Creek area, DNRC recommends to the Board in this final EIS (p. 2) that, if television or radio reception is impaired by the presence of the line, the applicant be required to take appropriate measures to modify either the receiving antenna system or the electrical transmission system, including the repair or replacement of loose or damaged hardware, to restore reception at least to present levels. Appropriate measures are listed on p. 43 of the draft EIS.

DNRC conducted a literature search on health hazards of electric transmission lines. No significant health hazards are documented for 115-kV lines. The health hazards that were considered include corona effects (such as production of ozone and oxides of nitrogen) and effects of electric and magnetic fields (such as induced electric shocks, both transient and steady-state, biological effects of electric and magnetic fields, and interference with cardiac

pacemakers). One hazard which exists for all transmission lines is the hazard of electric shock from contact with lines. If, for example, an aluminum irrigation pipe held by a person were brought in contact with the line, the person could be electrocuted. For this reason and others it is standard practice in the utility industry to keep transmission line rights-of-way cleared of those trees and other objects which could come into contact with a conductor.

Concern was expressed that if the mine were shut down, the burden of repaying the loan for a line which generated no income for the applicant might fall to the rest of the applicant's customers and members, depending upon the repayment arrangements.

ASARCO proposes to loan the money to the applicant to construct the line and to be repaid by a credit against its bill. If the applicant negotiates a rate for the sale of power that includes all relevant costs, such as depreciation and taxes, then there should be no cost to the general membership associated with the line itself. If the mine were shut down permanently, then the credits would cease. Depending on the specific form of the rate structure negotiated and the specific terms of the repayment credit, a temporary shutdown or a strike could cause problems.

The applicant's engineer commented that the costs of service to present Rural Electrification Administration customers should be reduced as ASARCO assumes a portion of the overhead cost; this will not necessarily lead to a rate reduction but will probably defer a rate increase.

DNRC agrees that, in the short run, a proper calculation of the rate structure for sale of power to ASARCO should lead to a spreading of some of the overhead costs to the company. In the long run, however, any growth in loads which causes the applicant to resort to high-cost sources of electricity would drive up the average cost of purchase of power to the co-op members. Unless the negotiated rate structure calls for ASARCO to assume the full marginal costs of purchase and delivery of power to the company, the costs will, in the long run, go up for all members of the co-op.

Would the lack of a static wire cause any lightning hazard to homes near the line?

Northwestern Montana is not a lightning-prone area, and for this reason the applicant and DNRC agree that a static wire would not be cost-effective. The purpose of a static wire is to prevent damage to substations and transformers from lightning which strikes the line; the presence of a static wire would not decrease the hazard to homes.

Can or should DNRC or the Board set the rate, conditions, and schedule for the applicant's repayment to ASARCO?

The Major Facility Siting Act states that the Board may condition the construction, operation, and maintenance of a permitted facility. DNRC takes the position that the Board cannot put conditions on a certificate's financial or legal arrangements.

Of what use will the line be to the applicant's customers after the end of the life of the mine?

According to the arrangements discussed in the application, after the life of the mine the line would have been fully amortized. It would be of no further use unless other developments occur in the area. The underbuild would continue to serve.

Siting the line along a road would render it subject to vandalism, especially when mine workers are on strike or out of work.

DNRC recognizes the danger of vandalism but believes that such activities would be as likely to occur if the line were hidden from public view where the vandals might be less likely to be observed.

IMPACTS ON AQUATIC SYSTEMS

The Montana Department of Fish and Game stated in a letter that the draft EIS does not address physical damage to aquatic habitats that may occur during construction of towers and access roads, and that the statement does not specify the location of towers in relation to aquatic systems.

Several construction-related physical impacts to aquatic habitats were summarized on p. 45 of the draft EIS; however, field inspection of all possible stream crossings revealed no areas where such damage could not be avoided by adherence to the requirements of the Natural Streambed and Land Preservation Act of 1975, its standards and guidelines, and Board-approved construction guidelines (pp. 45-46, draft EIS). Specific locations of towers and roads are not covered in the draft EIS because such locations must be decided upon by the applicant and approved by the Board as part of the centerline study after a certificate is granted.

The Montana Department of Fish and Game made several recommendations regarding line construction, including the following:

- 1. No poles should be located in the hundred-year flood plain because this could lead to damage of pole sites or require protective devices, adding to stream instability and erosion.**
- 2. Construction planning and design should be such that no sediment enters streams.**
- 3. Service or construction roads should bridge or cross by culvert low-gradient sections of streams so that velocity barriers to fish movement are not created.**
- 4. Pads for wire stringing should not be placed in drainage draws or ditches.**
- 5. Caterpillars and other vehicles should not cross streams or steep draws except on existing roads or on constructed service roads, nor should wire-pulling vehicles cross these areas; instead, wire should be winched across.**

These recommendations are excellent and should be incorporated into the construction guidelines (see p. 2) and recommended for Board approval.

The Montana Department of Fish and Game commented that line-related stream crossings or bank alterations must conform to the provisions of the Natural Streambed and Land Preservation Act.

The Soil Conservation Service, U.S. Department of Agriculture, suggests that no work should be allowed adjacent to live streams during times of downstream spawning, egg incubation, hatching, and swim-up of fry.

Concern was expressed over the transmission line's crossing of Lake Creek and the associated impact on fisheries because of ASARCO's alleged past record of lack of concern about impacts on aquatic habitats.

Any transmission line-related alteration (including vehicle crossings) of stream beds, banks, or stream-side vegetation must conform to the provisions of the Natural Streambed and Land Preservation Act and may require a permit from the local conservation district.

This recommendation is also appropriate for incorporation into the construction guidelines.

Although the transmission line will initially be paid for by ASARCO, Northern Lights rather than ASARCO is responsible for construction.

IMPACTS ON LAND USE

Concern was expressed about the effect the sixty-foot-wide right-of-way might have on homes and land use—that is, what land uses would be allowed on the right-of-way once the line is in place?

The area cleared for a transmission line right-of-way is lost to commercial timber production but may be used for cutting posts or Christmas trees and for crops such as hay, grains, and garden vegetables. Cattle can graze on a right-of-way, and roads can pass under the line. Tall machinery such as cranes cannot be driven under the line if there is danger of short-circuiting the current to the ground. People can work normally under 115-kV lines with no health hazard. The conductor surface gradient of approximately 10.5 kV/cm expected for the conductor size recommended by DNRC is not high enough to produce audible noise even under conditions of high humidity unless an insulator is cracked. The applicant should replace any insulators that crack.

The entire right-of-way need not be completely cleared to adequately protect the line from falling trees. DNRC will recommend for the Board's approval construction guidelines for tree clearing in the right-of-way stipulating that those trees that could damage the conductors if they were to fall be topped or removed. Smaller trees could be left within the sixty-foot right-of-way until they grew high enough to endanger the line.

The applicant has proposed to clear a strip 9 m (30 ft) wide where single-pole structures are used, and 15 m (50 ft) wide where H-frame structures are used (see p. 30 of the draft EIS). DNRC's recommended construction guidelines may stipulate a different clearing pattern.

For the segment of line having a distribution underbuild, poles would be closer together (9.3/km, 15/mi) than for either the existing 12.47-kV distribution line or the segment of transmission line not having an underbuild (in both cases, 7.4/km or 12/mi). The reason is that the increased tension caused by the additional wires requires closer pole spacing in order to maintain minimum ground clearance.

Can poles of the proposed line be placed farther from residences than the existing distribution line, where the line is to be underbuilt?

Yes. If the Board approves the application as recommended here, then DNRC will recommend a centerline in order to protect existing land use, land-owners, and visual and other environmental concerns along the present distribution line. Within limits defined by the sag of the conductors and the terrain, pole placement can be altered, but generally the most suitable method of minimizing or eliminating a routing problem is to bypass the problem area. Owners of land crossed by the corridor will be contacted about DNRC's proposed centerline.

Can residential customers hook up services to the proposed line between the Troy and Mount Vernon substations?

Residential customers can hook up to the proposed underbuild, a 24.9-kV distribution line. This underbuild, as described by the applicant, would extend from the Troy Substation south to the proposed water wells, approximately four miles southwest of Little Joe. The 115-kV transmission line cannot be used by residential customers because the high voltage cannot be cheaply reduced to usable voltages at residences along the line. The line would be available to serve new customers in the vicinity of Bull Lake after the mine operation is shut down in about twenty years.

IMPACTS ON VISUAL CONCERNS

Exception was taken to a statement in the draft EIS (p. 54, third paragraph) to the effect that people who live and work in the study area would see the line as a necessary and functional part of the landscape, and that they might become so accustomed to the line as to be not consciously aware of it.

DNRC stands by its statement. Not all local residents would become so accustomed to the line that they would not be consciously aware of it, but many would.

IMPACTS ON WILDLIFE

The Montana Department of Fish and Game commented that statements in the draft EIS that would lead one to believe that moose and mountain lion are rare in the study area are not entirely accurate. Both species are relatively abundant in comparison to other regions of the state.

The Department of Fish and Game is correct. DNRC's intention in using the word "rare" in the draft EIS was to describe the abundance of moose and mountain lion relative to the other big game species present.

The Montana Department of Fish and Game objected to a statement in the draft EIS indicating that wildlife impacts of the line would be eclipsed by the much greater wildlife impact of the mine and related facilities. The Department of Fish and Game objected that the synergistic effects of many individual impacts are not addressed.

Concern was expressed that, while the proposed 115-kV line would pose no electrocution hazard to the endangered bald eagles, the 24.9-kV distribution underbuild would because the conductors would be closer together than minimum accepted standards. It was suggested that the distribution underbuild be redesigned to eliminate all possibility of eagle electrocution.

DNRC agrees that the synergistic effects of individual impacts on wildlife are important and that piecemeal erosion of habitat places irreversible constraints on the future availability of habitat and can become significant as such losses continue. The statement in the draft EIS was intended to point out that, in the vicinity of the proposed Mount Vernon Mine and associated facilities (including a tailings pond and access roads), the proposed transmission line is likely to create no measurable, significant impact over and above the probable mine-related impacts as discussed in the EIS on the mine itself (USDA and Montana DSL 1978a).

Electrocution of bald eagles and other raptors by the 24.9-kV underbuild is indeed possible, and the Board has authority to require design changes where appropriate to reduce or prevent raptor losses. However, DNRC's studies in preparation of the draft EIS revealed that the proposed line poses negligible hazard to raptors. In this densely timbered area, hunting perches other than the distribution underbuild crossarms are abundantly available, and raptor use of these crossarms would occur rarely, if at all. The intensive baseline wildlife study conducted in the study area for the EIS on the mine application (USDA and Montana DSL 1978a) revealed no bald eagle use of the study area, and no raptor electrocutions due to the many existing distribution lines in the study area (figure 2, p. 21, draft EIS) have been reported. While eagles undoubtedly use this area from time to time, it is reasonably certain that the study area has no areas of concentrated use by eagles which could be termed critical. The set of guidelines used by DNRC in such matters (Raptor Research Foundation 1975) states:

It was not intended that all existing lines be altered, but it was implied that preferred poles would be modified when multiple electrocutions at specific locations could be documented and proved. . . . It is not economically feasible to modify all existing lines, and not necessary to have all new lines designed to protect raptors where they do not occur. . . .

Futhermore, modifying the proposed underbuild to a "raptor-proof" standoff design (Exhibit 15 in the 1975 Raptor Research Foundation report) would require an increase in pole length of approximately 3 m (10 ft) with an attendant increase in visual and land use impacts, as well as an increased cost of roughly \$100/pole (Sewell 1978). Spacing conductors of the distribution line to the specifications of the Raptor Research Foundation (1975) would be less costly (approximately \$12/pole; Shah 1978) but even that smaller expense would not be justified, considering the low risk of eagle electrocution. DNRC sees no reason to alter the design of the proposed under-

build, since the negligible risk of raptor electrocution cannot justify the additional economic and environmental costs. Should line monitoring or other studies after construction reveal eagle use of the right-of-way, those poles posing a hazard to the eagles should be fitted with a wooden obstruction (preferably an inverted "V" of 2" X 2" boards) on that side of the crossarm carrying two conductors (Nelson 1978).

ALTERNATIVE ROUTES

Several people favored the DNRC western route (see figure 9, draft EIS) over the applicant's preferred route because the draft EIS (table 5, p. 66) shows fewer residences found within 0.3 km on DNRC's western route.

While more residences are indeed found within 0.3 km of the applicant's preferred route, all or nearly all of these are already served by the existing 12.47-kV distribution line and would thus be affected by a powerline regardless of where—or whether—the proposed transmission line is built. The number of residences *newly* affected by a powerline should the applicant's preferred route be granted is small. Thus, the number of residences within 0.3 km was not thought by DNRC to be the deciding consideration in route selection.

POLICY

It was suggested that DNRC and the U.S. Forest Service should conduct a broad review of the increased potential for hard rock and other mining development on Kootenai National Forest, which the 115-kV line would provide, under Section 102 of the National Environmental Policy Act. It was also suggested that regional grid plans should be made now and that DNRC should prepare a regional EIS for this part of Montana, since the potential for development of other ASARCO holdings, increased recreational use, and the demand for forest commodities and water resources so dictate.

It was asked whether, since the U.S. Forest Service easement permits do not consider public need (as does the DNRC permit), the U.S. Forest Service is granting a favor to ASARCO, and whether a private individual would be as likely to get an easement for, say, a ski-touring trail as ASARCO is to get a powerline easement.

DNRC, other state agencies, and the U.S. Forest Service have informally discussed the possibility of a regional EIS or review of northwest Montana. Montana state government recognizes that such a review might be desirable. However, there is no practical or legal mechanism to conduct the review, nor are funds available.

The U.S. Forest Service is not granting a favor to an individual or company when it issues a special use permit. Rather, these permits fill a need that cannot be met other ways and are issued only after an assessment by the Forest Service of the need to use national forest land. Each applicant must demonstrate that other alternatives to the use of national forest land do not exist or are not feasible. Special use applications are also examined for compatibility with existing and planned use of the resources on, or adjacent to, the land in the permit application. In the case of the application for this transmission line by Northern Lights, the need, alternatives, land capability, and compatibility with other uses have been assessed in the draft EIS.

PART THREE CORRECTIONS TO THE DRAFT EIS

Page	Correction
7	In the seventh line of the first paragraph under "Applicable Statutes and Permits Required," omit the words "above ground."
8	<p>In the ninth line of the first paragraph under "History and Description of Proposed Action," omit the first word, "peak," and substitute "average," so that the sentence reads, "The purpose of the proposed line is to serve an anticipated average load of approximately 14 megawatts. . ."</p> <p>The last line of the same paragraph reads, "At the time of this publication, ASARCO has not yet been granted the necessary permits for construction." Since then, the U.S. Forest Service and the Montana Department of State Lands have released a final EIS on ASARCO's proposed Mount Vernon Mine and associated facilities (USDA and Montana DSL 1978b). That EIS describes the status of all permits necessary for ASARCO's proposed operation. The U.S. Forest Service, Kootenai National Forest, has approved ASARCO's plan of operation for the proposed Mount Vernon Mine and associated facilities subject to stipulations designed to reduce or eliminate any environmental impact on national forest land. The Forest Service and ASARCO must still arrive at a use agreement regarding the proposed all-weather access road; that agreement is awaiting the submission by ASARCO of a final road design. On November 27, 1978, the Montana Department of State Lands issued a hard rock operating permit to ASARCO for the proposed project under the Montana Hard Rock Law. The permit was issued subject to a list of conditions.</p>
20	In the third line of the first paragraph under "Capacity," insert the word "average" after "projected," so that the sentence reads, "The projected average load is 14 MW, with possible peaks to 18 MW."
23	In the second line from the top of the page, "60 kVA" should be changed to "60 MVA." In the eighth line, the "BPA/PPL line" should have been identified as a PPL line. It should also have been mentioned in that sentence that, besides the uncertain scheduling of the upgrading, it is not known who will pay for the required transformer when the line is upgraded.
27	In the fifth line from the top of the page, add "modify" after "conditionally approve," so that the sentence reads, "Under the Major Facility Siting Act, the Board must approve, conditionally approve, modify, or deny the application. . ."
39	In the sixth line of the footnote beginning "NOTE," change "sixty" to "sixth."
43	In the second paragraph, seventh line, the radio noise level given (17 dB) refers to DNRC's recommended conductor size ("Partridge") rather than the applicant's proposed conductor size.
77	In the second line of the third paragraph, "20-year life" should be replaced with "16-year life."

APPENDIXES

APPENDIX A

INFORMATION PROVIDED DNRC BY SHAH AND ASSOCIATES, CONSULTING ENGINEERS

Letter of June 16, 1978	20
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 PART OF NATURAL
 RESOURCES & ENVIRONMENT

 SHAH & ASSOCIATES
 ENGINEERS
 CONSULTANTS

Dr. Larry Nordell Page 2 June 16, '78

 SHAH & ASSOCIATES
 ENGINEERS
 CONSULTANTS
 467 NORTH FREDERICK AVE. / GAITHERSBURG, MARYLAND 20760 / (301) 926-2797

June 16, '78.

 Dr. Larry Nordell
 Montana Dept. of Natural Resources
 Conservation
 32 South Ewing
 Helena, Montana 59601.

Dear Dr. Nordell:

 Sub: Northern Lights Application for Electric
Transmission Line to Proposed Mt. Vernon Mine

 As per your request, I am rushing the results, as they develop, of
 our investigations in connections with the application to construct
 transmission line by Northern Lights,

 (1) Comparison of On-site Generation Versus Transmission of
 Purchased Power

We undertook an economic analysis of on-site generation versus transmission of purchased power from Troy to ASARCO mine by Northern Lights Inc. Figure 1 depicts the results. Total cost of both the power purchased at Troy by Northern Lights Inc. and transmission line as shown by the curve marked "Proposed Northern Light Alternate" Give the lowest total cost in mills/KWH. For example, even if we assume that oil prices will not increase in next 20 years, and electric rates will increase as outlined in (5) below, then in years 1978-98, the total cost of on-site generation is 51.9 mills/KWH compared to 5 mills/KWH in 1978 and 10.83 mills/KWH in 1998 for the proposed Northern Lights alternate.

Following cost data and economic parameters were used in this analysis:

1. Fixed charges:

Depreciation.....	5%
Interest.....	6.2%
Taxes.....	1.17%
Insurance.....	1.21%
2.

Packaged 25 MW unit.....	\$ 3,036,000
Step-down transformer....	160,000
Civil-structural.....	78,936
Oil storage, foundation,	
Piping to units.....	126,723
Contingency allowance.....	263,707
Operation and maintenance	
cost.....	1.8 mills/KWH
1978 oil price (as per	
your data).....	\$ 3.57/10 BTU
3. Two scenarios for oil prices:

6% escalation	
per year	
0% escalation	
4. Cost of power purchase.....

3.208 mills/KWH	
-----------------	--
5. Assumption: Rate of increase of 60% in 1979,
20% in 1980 and 2% per year after 1980.

 (2) Feasibility of Southern Route

We investigated the feasibility of supplying ASARCO mine from southern sub-stations. Because of the relatively small magnitude (18 MW) of transmitted power in relation to the capabilities of the system, we believe that power requirements of ASARCO can well be supplied from Noxon and Cabinet George sub-stations. However, because of the lack of available routes due to mountainous area, approximate transmission distance from Noxon to ASARCO will be 190% higher and from Cabinet George to ASARCO will be 220% higher than the proposed route from Troy to ASARCO. Thus, the proposed line route do offer the lowest cost alternate. We believe that it does offer the best available alternate from engineering point-of-view.

SHAH & ASSOCIATES
ENGINEERS
CONSULTANTS

**ENGINEERS
CONSULTANTS**

Dr. Larry Nordell

Page 3

June 16, '78

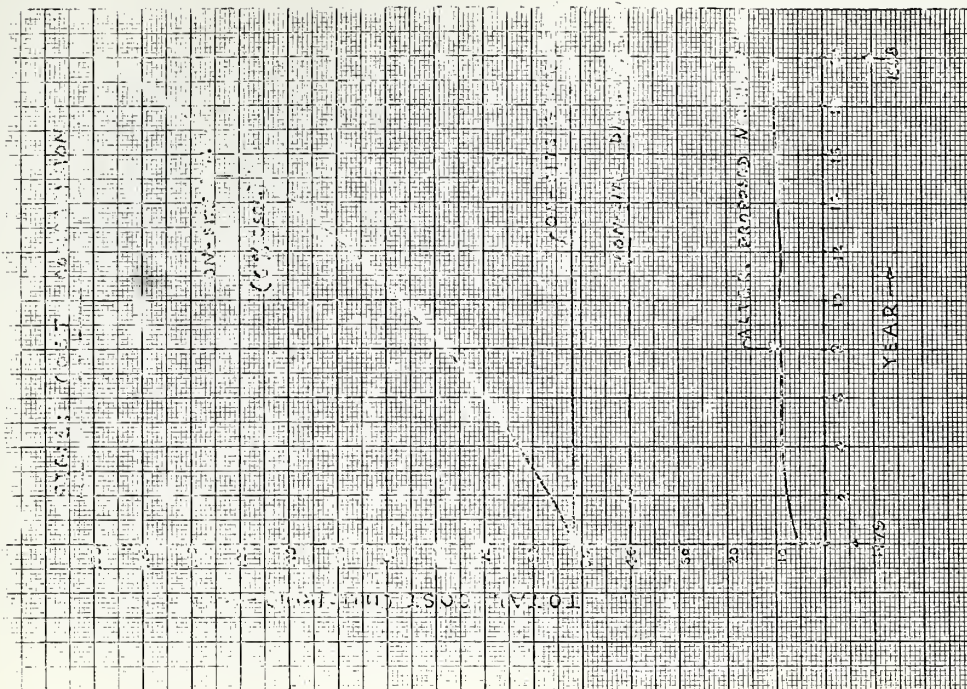
AS I discussed with you, I am still waiting to hear from Mr. Swell concerning line insulation. After I receive the necessary information, I will be in touch with you to submit results of my analysis. In the meanwhile, should you need information, please advise.

Sincerely yours,

K. R. Shah

Dr. K. R. Shah, P. E.

cc Bob Anderson.



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JUN 29 1978MONT. DEPT. OF NATURAL
RESOURCES & CONSERVATIONENGINEERS
CONSULTANTS

SHAH & ASSOCIATES

467 NORTH FREDERICK AVE / GAITHERSBURG, MARYLAND 20780 / (301) 926-2797

June 26, 1978

Mr. Bob Anderson
Administrator, Energy Planning Division, DWRG
32 South Wing, Helena, Montana 59601.

Dear Mr. Anderson:

Subj: "Review of Transmission Line Proposed by
Northern Lights Inc."

We have reviewed the proposed design of Northern Lights Inc., using the information provided by Mr. Sewell of Sewell & Associates and Dr. Nordell of Department of Natural Resources and Conservation. In the following we would outline our responses to the questions that we were asked to investigate as per your letter April 10, '78.

1. Review of the Proposed Design:

Our review of the proposed design indicates that (1) modification of conductor size is necessary for conformance with REA guidelines and (11) specification of insulators are required. Our recommendations are:

- (1) The conductor size selected should be "PARTRIDGE" for 115 kV line as per REA Bulletin No. 62-5, July, 1976.
- (11) Based on the data submitted in the reports, subsequent telephone conversations and letter dated June 21, '78, from Mr. Sewell, we can not determine the adequacy of the insulation level, type and number of insulators. Since this line will be constructed at higher elevations sometimes as high as 6000 ft. we feel a definite need to be cautious in selecting a type and number of insulators to prevent insulator flashovers.

SHAH & ASSOCIATES

ENGINEERS
CONSULTANTS

Mr. Bob Anderson

Page 2

June 26, 1978

2. Suitability of 115 kV Level:

Because of the power transfer at 115 kV at Troy sub-station we feel that 115 kV voltage level selected by Northern Lights is most economical. If alternate voltage level such as 69 kV is to be used, additional power transformer will be required to reduce the voltage from 115 kV to 69 kV. This would increase the cost by about \$200,000. However, at 69 kV, a lower conductor size would be required. The saving in conductor costs are only about \$10,000. Hence from the economic point of view we feel that 115 kV voltage level is the best choice.

3. Radio Interference Levels:

If the conductor size recommended in (1) above is selected, then maximum conductor surface gradient is estimated as 10.52 kV/cm. Because of the low conductor surface gradient, we estimate that the radio noise at 1 MHz produced by conductor corona is about 17 dB above 1 microvolt per meter. We therefore do not anticipate any problem associated with radio noise emanating from phase conductors. However, radio and TV noise of the insulators and associated hardware should be considered. Our analysis of this area shows that "Broadcasting" reveals that only one TV station from Spokane, Washington is received. Hence, we feel a definite need to protect quality of radio and TV receptions for the people living in close proximity of the line. Towards this end, we recommend following:

"If radio or TV interference is caused by or from the operation of the 115 kV line in those areas where good radio television reception is obtained, Northern Lights will initiate appropriate modification of the receiving antenna system to repair loose or damaged hardware or take other actions necessary to restore present levels."

4. Potential for Television Interference:

As discussed in (3) above, because of low radio noise from the conductor corona, we do not anticipate television interference problem associated with conductor corona. We do, however, feel that because of the loose hardware and insulator performance, there is a possibility of interference at TV frequencies. For this reason, our recommendation given in (3) above is necessary.

Mr. Bob Anderson

Page 3

June 26, 1978

5. Proposed Mitigating Measures:

Following mitigation and elimination measures can be used-

- (i) Modification of receiving antenna system
- (ii) Separation of antenna from the power line
- (iii) Installing passive reflectors on towers
- (iv) Installing resonant systems
- (v) Replacing cracked insulators
- (vi) Replacing insulators which radiate very high noise at radio and television frequencies
- (vii) Tightening loose line hardware.

6. The question raised in this section has been answered in my letter to Dr. Nordell dated June 16, 1978.

7. Transmission System Alternatives:

Our review of the area leads us to conclude that overhead transmission is the most economical alternate. Underground transmission at 115 kv line will cost about one million dollars per mile and thus for 18 mile section it will be about eighteen million dollars, while cost of overhead transmission line as proposed by Northern Lights is only one million dollar.

8. Cost Estimate for Onsite Generation:

We have already sent our response to this question to Dr. Nordell in our letter dated June 16, 1978.

9. Discussion of Any Other Environmental Impacts:

We do not anticipate any impact associated with audible noise and electric fields from the proposed 115 kv line. However, under certain conditions both natural and man-made a real danger exists if the broken conductors or towers fall on objects located in the right-of-way. Because of this, we would discourage parking cars and recreational vehicles in close proximity of the towers.

Mr. Bob Anderson

Page 4

June 26, 1978

In summary, we feel that Northern Light's proposed plan to construct 115 kv overhead line is the best available alternate from engineering point of view. However, we feel as outlined above some modifications of the proposed design. Also, we need to "nail down" the number and the type of insulators to be used on the proposed line.

With this letter report, we have completed the tasks assigned to us, per your letter dated April 10, 1978. Should you need more information or elaboration of the evaluation given above, please do not hesitate to call me. It was pleasure working with members of your staff and with you.

Sincerely yours,

K. R. Shah

Dr. K. R. Shah, P.E.

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OCT 19 1978

MOUNT. DEPT. of NATURAL
RESOURCES & CONSERVATIONSHAH & ASSOCIATES
ENGINEERS
CONSULTANTS

467 NORTH FREDERICK AVE. / GAITHERSBURG, MARYLAND 20760 / (301) 926-2797

SPECIAL DELIVERY

October 27, 1978

Mr. Bob Anderson
Administrator
Montana Department of Natural Resources
and Conservation
32 South Bldg
Natural Resources Building
Helena, Montana 59601

Dear Mr. Anderson:

Subject: Proposed 115-kV Transmission Line from Troy to
Mount Vernon Mine

Pursuant to our investigations of the 115 kV line design proposed by Northern Lights, Inc., we would also like to discourage the use of fiberglass crossarms on the 115 kV line.

The basis of this recommendation is the recent study that we undertook for one power company in South Carolina. For the first time we found that if fiberglass crossarms are used as a part of line insulation, then after a couple of years in use, it may cause arcing and possible faults on line. The reason for this behavior is the strong possibility of the deterioration of coating on fiberglass crossarms due to atmospheric effects and leakage currents from the line. We have found that there are a number of utilities in the United States experiencing arcing and flashover problems. Our extensive experimental investigation during salt contamination conditions confirmed these possibilities. Because of this, we recommend the following:

1. Fiberglass crossarms should not be used in areas with the possibility of pollution.
2. In unpolluted areas, fiberglass crossarms should be used with full line insulation.

I have discussed at length my comments concerning the draft of the Environmental Impact Statement with Dr. Nordell, Mr. Ray Breuninger, and Mr. Larry Thompson. The report was very well written. I have given them my thoughts on developing of "weighting scheme" to select the most optimum line route. I also recommended

that the line design proposed by Northern Lights is inadequate and does not conform to REA guidelines. Hence, my recommendations as given in my previous letter to you on June 26, 1978, should be incorporated as a part of the construction permit.

As soon as I get the transformer costs, I will be in touch with Dr. Nordell to discuss other alternatives. In the meanwhile, should you have any further questions, please do not hesitate to write or call me.

Sincerely yours,

K. R. Shah

Dr. K. R. Shah, P.E.

APPENDIX B

INDIVIDUALS ATTENDING THE PUBLIC COMMENT MEETINGS HELD IN TROY AND NOXON IN OCTOBER 1978

Troy Public Comment Meeting:	
October 10, 1978	26
Noxon Public Comment Meeting:	
October 11, 1978	27

**TROY PUBLIC COMMENT MEETING:
OCTOBER 10, 1978**

J. D. Bingham
ASARCO, Inc.
Box 440
Wallace, Idaho 83873

Tom Boller
Box 478
Troy, Montana

Harold Blanchard
P.O. Box 608
Troy, Montana

Wanda Blanchard
Box 100
Troy, Montana

* Laurie Blazich
Box 288
Troy, Montana

T. Burris
Troy, Montana

Bob Case
P.O. Box P
Troy, Montana

* Ernest Davis
Box 584
Troy, Montana

Regina Davis
Box 584
Troy, Montana

Jean Guidry
Route 3
Troy, Montana

Ivan H. Hodges
Route 2
Troy, Montana

* Kathy Johnson
Route 1
Troy, Montana

Chuck Jones
Troy, Montana

Joanne Kyriss
Route 3
Troy, Montana

* Steve Loken
Route 1
Troy, Montana

Mildred Main
Route 3
Troy, Montana

* Bill Martin
Route 3
Troy, Montana

* Jeannine Martin
Box 561
Troy, Montana

* Ralph E. Martin
Route 2
Troy, Montana

* Tom Martin
Box 561
Troy, Montana

* C. S. McGuire
no address

* Laura Meyer
Route B
Troy, Montana

* John Mohar
Route 1
Troy, Montana

Everett Phelps
Route 3
Troy, Montana

* Guilda Phelps
Route 3
Troy, Montana

Erval Rainey
Box 199 Route 2
Sandpoint, Idaho

James Sewell
Box 160
Newport, Washington

LaVerne Stolz
P.O. Box 225
Sandpoint, Idaho

J. Strong
Troy, Montana

* Mrs. Jack Templin
P.O. Box 237
Troy, Montana

Melvin Thomas
Route 3
Troy, Montana

Eleanore Yurg
Route 3
Troy, Montana

* Offered oral comment

**NOXON PUBLIC COMMENT MEETING:
OCTOBER 11, 1978**

J. Bingham
ASARCO, Inc.
Box 440
Wallace, Idaho 83873

Robert Cheshire
Box 207B
Bull River
Noxon, Montana 59853

Ralph Driear
Montana Department of State Lands
Helena, Montana 59601

- * Douglass Ferrell
Route 2 Box 270
Trout Creek, Montana 59874

John & Mary Greer
Box 1482
Noxon, Montana 59853

- * Cesar Hernandez
Star Route
Noxon, Montana 59853

Sterling Hinds
Star Route
Noxon, Montana 59853

Robert E. Horsman
Box 1463
Bull River
Noxon, Montana 59853

Cedron Jones
Star Route Box 8
Heron, Montana

- * Sharon LaBontz
Box 1512
Noxon, Montana 59853

Sandra McDowell
Box 209
Bull River
Noxon, Montana 59853

David & Brenda Nesbitt
General Delivery
Heron, Montana

- * George J. Oberst
Box 609
Noxon, Montana 59853

Erval Rainey
Box 199A, Route 2
Sandpoint, Idaho

- * Terri Rogers
Star Route, Box 106C
Noxon, Montana 59853

James A. Sewell
Box 160
Newport, Washington 99156

LaVerne Stolz
P.O. Box 225
Sandpoint, Idaho

D. O. Suhr
Box 440
Wallace, Idaho

- * Offered oral comment

APPENDIX C

LETTERS OF COMMENT ON THE DRAFT EIS

Stanley G. Davis and Family	30
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Ernest Davis	32
Frank A. and Eleanore R. Yurg	34
Laurie Blazich	35
Town of Troy	36
Soil Conservation Service, USDA	36
Montana Department of Fish and Game (Oct. 5)	37
Montana Department of Fish and Game (Oct. 6)	38
Northwest Citizens for Wilderness	39
Cabinet Resource Group (Oct. 8)	39
Cabinet Resource Group (Oct. 12)	40
James A. Sewell and Associates	42

Troy, Montana
October 6, 1978

Environmental Coordinator
Dept of Natural Resources and Conservation
32 South Ewing
Helena, Mt. 59601

Dear Sir:

I am writing in response to your Environmental Impact statement on the power transmission line to the ASARCO mine project. These comments are the feelings of the five members of my family.

We strongly oppose the ASARCO mine project because we feel it affects on our area would be more bad than good. This feeling was strengthened by the report on TV news a few nights ago which listed the disregard of ASARCO for the safety of its workers and their disregard for handling their problems with OSHA. We don't see how any intelligent citizen could want a company like that doing their business in our backyards.

And with no ASARCO, there will be no

need for a power transmission line.

Sincerely,
Atkinley H. Davis & family
Box 182

Troy, Montana
59935

Douglas Ferrell
Rt. 2 Box 270
Trout Creek, Mt. 59874
Oct. 11, 1978

Kootenai National Forest and Montana Department of Natural
Resources and Conservation

Box AS
Libby, Mt.
Attention: Bill O'Brien

I would like to comment on the draft E.I.S. entitled
"Proposed 115-kv Transmission Line from Troy to Mount Vernon
Mine".

Tonight I attended a public meeting to comment on this E.I.S.
and I have recently reviewed the publication fairly thoroughly.
This particular E.I.S. only underscores the frustration and
disappointment I have experienced all along in following the
development of ASARCO's planned mine, and attempting to participate
in public decision making on this issue.

I realize that ASARCO's right to prospect, file claims, and so
on are guaranteed under the 1872 mining laws without any provision
for the public review of need or desirability, but it is also true
that ASARCO requires a number of additional permits, or concessions
and favors if you will, from the people of the United States,
represented by the various agencies and bureaus involved with this
project. ASARCO'S proposal has raised many important questions
about the relative desirability of an operation like the Mount
Vernon mine in terms of growth, employment, amenity values and the
intrinsic values of remote wild areas, environmental quality,
social disruption, domestic copper demand, etc., etc. I find it
disappointing that not one of the many public agencies which has a
voice in determining the future of this proposal has so far even
partly addressed these issues, and I am keenly disappointed to
have another collection of what to me is technical trivia which
has very little to do with the important impacts and issues as I
see them.

Frankly, I find it fantastic to contemplate the prospect that a
profit seeking corporation can enter public lands, acquire title to
various xxx areas and commence to reduce a mountainside to waste
and tailings, pollute our air and water (within limits), run
various roads, pipelines and powerlines over more public lands,
induce drastic impacts due to massive local population increases,
etc., without any representative of the public ever determining
whether such a use of public resources is in the public interest.
In this case, I feel strongly that our public servants are not
serving the public. With all the environmental statements that have
been and will be prepared concerning this mine, I feel our public
servants are engaging in a complex and ludicrous game of pushing
paper and frustrating the public while ignoring the central issues.

In this particular E.I.S. I find both the DNRC and the USFS
typically failing to consider the mine's impacts in a whole and
complete manner, focusing instead on a small specific aspect of
the proposed development. Evidently the DNRC has no legal power
to consider public need for the project itself, but in spite of
the fact that the FS has no such limitation placed upon it, it
has assumed the limitation itself.

In considering the application for a power line easement then,
the FS has closed its eyes to considering whether or not ~~is~~ approving
the permit is a good idea in any but the narrowest sense. The impacts
listed for this power line ("the effects... would not be significant"
from the conclusions on page 79) seem to me to be absurdly myopic.
In an analogy this statement brings to mind is that of an E.I.S.
written on a proposal for firing a gun at an object, where the
impacts are listed as the bullet's effects on the air it passes
through, without any consideration of what may happen to the target.

I question what motive the FS might have for bestowing the
favor of an easement on a private corporation to enable it to engage
in activities which may well be contrary to the public interest,
which the FS is supposed to serve. I feel that before such a use is
made of public resource a serious appraisal should be made of
whether or not the public interest is in fact being served or
circumvented by the approval of the application for this power line.
I feel that this is what the E.I.S. should have done and has failed
to do.

I would like to further comment that I am personally opposed to
this power line because I am opposed to development of the mine.
The United States does not now need the copper the mine promises.
In fact there is such a glut of cheap copper on the market at this
time that domestic copper producers are having difficulty keeping
existing mines operating. Beyond this, I do not feel that any of
the other financial advantages promised by the mine outweigh the
disadvantages of destroying the peace and beauty of one of the few
remaining peaceful and beautiful places left in the world.
Thank you for the opportunity to comment.

Sincerely,

O.C. Bauous
Comola
Cabinet Resources Group

RECEIVED

OCT 12 1978

MONT. DEPT. OF NATURAL
RESOURCES & CONSERVATION

10-12-1978

Fox, Mont.

Montana Department of Natural
Resources & Conservation,
Dear Sirs:

I have been a resident
of Lincoln County, Mont. most of
my sixty five years.
Some people call me an
overaged environmentalist
& others call me worse.

I was at the Board
meeting here the evening
of the 10th Oct. so you
have a recording of what I
had to say at that time.

However since that time I
have gotten my maps out &
did a little research of my
own, & here is what I
came up with.

Getting my half inch maps
out I found these three
distances from a rule laid on
the map.

From Mt. Vernon to the
sub-station at Fox measured
this way is 15 miles.

In the draft E. J. D. book
I received from you people
no mention is made of the
added 4 1/4 mi. from the sub-
station to Kootenai Falls
~~separated~~ proposed R.E. a.
Dam. This would add up to
19 1/4 direct miles.

From the Foxon dam to
Mt. Vernon measures 20 mi.
direct.

From Cabinet Gorge to
Mt. Vernon is 12 direct miles
so it would seem to me
that the Cabinet Gorge to

Mt. Vernon route has never been considered or checked into.
As I stated there would be no residences or touches involved in this route.

Also, I can't see that the environmental impact on this would be any where near what it would be at Kootenai Falls dam.

As to Cost I don't believe it would be prohibitive & as Washington Water Power will be able to deliver the power with no future cut back in sight & as the Bonneville Power Administration is taking the power they put into the Co- ops in the early 1980's which P.E. & A. claims would make it necessary to get power from Kootenai Falls

And as the people involved in the area of the line proposed would rather not have it crossing their properties, in my estimation a line from Cabinet Gorge dam to Mt. Vernon is the sensible solution to the whole problem & I believe in the long run the economical one.

Now environmentally speaking, there are less than two hundred miles of the Kootenai River in the United States.

Of this there are perhaps 115 or 120 mi. in Mont.

Of this 60 mi. (one half) is already behind Kootenai dam

Besides these the Corps of Engineers also has plans laid for a dam at Leaning about 13 mi. west of Troy.

& another at Katka about six miles east of Bonner Ferry Idaho.

There are already over 1,000 miles of man-made lakes on the Columbia River.

With all of the other sources of power that are being considered in Montana at this time I believe that it would be down right stupid to enforce any more dams on the Kootenai River in the foreseeable future.

Respectfully yours

Erect Davis, Bx 584

Fry Mont
59935

OCT 16 1978

Sir - I would like to submit my preference as the power line from the Clearcreek -

RES: D. H.

we would certainly prefer that the line would follow the Clearcreek Road - thru the Clearcreek area because it seems the straightest - a most logical route.

a. it would affect the least number of people regarding TV & radio reception

c. it would be more scenic

d. if it came along the existing route, the additional right of way requirement would be less. not all the trees are carefully left standing to hide the power line now there

e. it certainly would be an unsightly addition along picturesque Lake Clearcreek Road.

Most Sincerely
Mrs. E. Davis
Frank A. Davis

Box 288
Troy, Mt. 59935

Wagne Wetzel, Environmental Coordinator

DNR

32 South Ewing, Helena, Mt. 59601

RECEIVED
OCT 2 1973
MONT. DEPT. OF NATURAL RESOURCES

Dear Mr. Wetzel:

I would like to make a few brief comments on the proposed Avonco powerline EIS. I hope these comments can be used, though they are late, in view of the abbreviated comment period.

1) No mention is made of possible health hazards. At the least, the Table One summary of potential impacts should include the item, "Health effects.. unknown."

2) I feel that no permit should be granted at this time, as the time lag between the granting and the actual construction may bring changes that would call for different recommendations.

3) If DNR goes ahead with the granting of a permit, I support DNR's Western

Route (A-B-D-E-F-L-N-S-U-V-W), as the one causing the least impact on residents.

Thank you.

Laurie Blaydel

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

P. O. Box 970, Bozeman, Montana 59715

October 10, 1978

TOWN OF TROY

Drawer S

TROY, MONTANA 59835

October 6, 1978

RECEIVED
OCT 11 1978

MONT. DEPT. OF NATURAL
RESOURCES & CONSERVATION

Robert Oliver,
Assistant Administrator
Centralized Services Division
32 South Ewing
Helena, Montana 59601

Dear Mr. Oliver:

It is becoming apparent that the ASARCO mine scheduled for the Troy area will inevitably become a reality. It is equally apparent, that a project of this proportion will have a monumental impact on this area. Troy, being the closest community to the project, will receive the brunt of the impact. If we as a community do not address this situation immediately, Troy may never recover from the initial onset. We are already suffering from years of neglect and poor planning that warrants correction now. It is our intention to address these present and future problems before the influx of people occurs, rather than after the fact. We are handicapped until we know what ASARCO's plan of action is. However, ASARCO has been unresponsive to us. They are refusing to deal with us on a local level, and are keeping us in the dark. Our inquiries for information have gone unanswered. It is vital to Troy that we meet and discuss future plans with ASARCO officials.

It has been suggested by the Department of Community Affairs and the Northwest Montana Human Resources Council, that we contact the agencies that are reviewing the ASARCO project, in order that you might bring pressure to bear upon ASARCO to deal with us on a local level. ASARCO is strong-arming their way through and Troy (who will be effected the most) is being left out of the picture entirely.

You, as a reviewing agency, should be concerned with this situation and it should be your duty to help us with its solution. Please notify us if there is anything that you can do to help us. I can be reached at 295-4151, Monday through Friday, between 9:00 A.M. and 5:00 P.M.

Sincerely,

David M. Steele

David Steele
Administrative Assistant

Mr. Wayne A. Wetzel
Environmental Coordinator
Montana Department of Natural Resources
and Conservation
32 South Ewing
Helena, Montana 59601

Dear Mr. Wetzel:

We have reviewed the draft environmental impact statement for the proposed 115-KV transmission line from PBA's Troy Substation to ASARCO's proposed Mount Vernon Mine.

We have only one comment to offer relative to page 45, paragraph 2, last sentence, which reads: "Impacts to trout can be mitigated by prohibiting work adjacent to live streams during periods when spawning is occurring downstream from the crossing." We believe the period should be extended to include egg incubation, hatching, and swim-up of fry.

Thank you for the opportunity to comment on this draft EIS.

Sincerely,

L. J. Haderlie

Van K Haderlie
State Conservationist

DS:cc



STATE OF MONTANA

DEPARTMENT OF

FISH AND GAME

Helena, MT 59601
October 5, 1978

Mr. Wayne Wetzel

2

October 5, 1978

Mr. Wayne A. Wetzel, Environmental Coordinator
Department of Natural Resources & Conservation
Helena, MT 59601

Dear Wayne:

A review of your EIS on the proposed 115-KV transmission line from Troy to the Mt. Vernon mine by one of our Ecological Services Division people has indicated several deficiencies and other problems with the report.

Some of the site-specific information collected by the Department of Fish and Game for the EIS was omitted from the report. Also, there was apparently no ground truthing by the DNR of the several routes being considered for line siting.

Two statements in the report were not entirely accurate: "Mountain lions are rare but the study area is apparently included in the home range of several individuals," and, "Moose are rare but wide-ranging in the Stanley and Lake Creek valleys." Both mountain lions and moose are large animals whose behavioral traits dictate dispersed populations. Neither species is rare in the Lake Creek valley; on the contrary, our data show that both mountain lions and moose are relatively abundant as compared to other regions of the state. Both species utilize Stanley Creek intensively, and for moose the area of the proposed transmission line in the drainage is important winter range. Also, it is known that at least eight different lions, including two family units, have utilized Stanley Creek over a 2-year period, and lions were documented as occurring at or near eleven of the line segments cited in the EIS.

The following was extracted from the reviewer's comments:

"As we have seen in the past, piece-meal study of projects, developments and growth has not been effective in assessing the synergistic effects of these factors upon the wildlife resource. The following statements found on page 72 of the DNR draft EIS reveal questionable consideration of the wildlife of the Lake Creek valley and its potential impact from powerline construction, maintenance and mere existence: 'Use by humans of all areas except that along alternative T-V is already high, and little additional disturbance would be expected to result from line construction...impacts of the line upon wildlife would be eclipsed by the much greater impact of the... (mine) facilities....'"

Thank you for the opportunity to review this EIS.

Sincerely,

Robert R. Martinka

Robert R. Martinka, Chief
Baseline Studies Bureau

RRM/sd

cc: Environmental Quality Council
Tom Hay

Helena, MT 59601
October 6, 1978

Helena, MT 59601
October 6, 1978

Mr. Wayne Wetzel, Environmental Coordinator
Department of Natural Resources & Conservation
Helena, MT 59601

Dear Wayne:

Enclosed are some additional comments on your draft EIS covering the proposed transmission line from Troy to the Mt. Vernon mine.

These comments were prepared by our regional fisheries manager in Kalispell, and describe anticipated impacts to the aquatic resources of the area. We would appreciate any consideration you could give to the points he mentions.

We would also like to caution that any stream crossings or bank alterations would have to conform to provisions of the Natural Streambank and Land Preservation Act.

Sincerely,

Robert R. Martinka, Chief
Baseline Studies Bureau

5d

Enc

cc: Environmental Quality Council
Tom Hay

STATE OF MONTANA
DEPARTMENT OF FISH AND GAME
HELENA, MONTANA

RECEIVED
OCT - 6 1977
ENVIRON. RESOURCES

Office Memorandum

TO : Robert P. Lumbach
Attn: Jim Rosew .z
DATE: October 5, 1978

FROM : Tom May
Hy: Bob Schumacher

SUBJECT: Proposed Transmission Line from Troy to Mount Vernon M.ne

This impact statement does not address any of the physical damage to the automatic habitat that may occur during construction from site location of towers and from any service or construction roads to such towers.

The statement does not specifically locate towers to the terrain on which they will be placed as regards to streams or gullies that led to streams. In the past many power lines and towers have been constructed in stream flood plains or actual water courses. These become damaged or threatened at flood stages and then require construction of protective devices or rip-rap in the drainage channel. Protection devices such as deflectors or cribs add to and increase stream instability and erosion.

There are state and federal water quality standards for sediment. It is unreasonable to allow construction on planning and design which will cause sediment (even if only "temporarily") when better designs can alleviate causes for sediment. Although the sediment may be visible only temporarily, sediment brought to the stream bed may cause problems for years.

No towers should be located within the 100-year flood plain. Service or construction roads should be bridged or culvert-crossed on low gradient sections of streams so velocity barriers of fish are not created.

Pads for wire stringing should not be in drainage draws or ditches. Use of vehicles to pull wire should not physically cross streams or steep draws but wire should be winched across and interpillars etc. should not cross these areas except on existing roads or on constructed service roads.

Bob

RES: 08

—38—

Northwest Citizens for Wilderness

P.O. Box 635 Helena, MONTANA 59601
PHONE 406 442-0597

October 10, 1978

Environmental Coordinator
State of Montana, Dept. of Natural
Resources and Conservation
32, South Building
Helena, MT 59601

Dear Wayne:

Thank you for providing an opportunity to review the Department's Proposed 115 kv
Transmission Line from Troy to Mount Vernon Mine Draft EIS.

To begin, we would like to comment on the documents distribution (or lack of). A trip through the northwest the past few days disclosed many had not received the Draft up until the last day or two of the comment period. A telephone call to DNRC indicated extension was not possible. The combination of these two factors is quite disturbing.

One point which we made in reply to the Department of State Land's ASARCO Draft EIS is the lack of any indication when actual mine start-up is to begin. You have adequately covered this line of thought together with the attendant problems on page 81. The factor of mine start-up, based upon the metals market's financial condition also applies to mine shut-down (and attendant social problems) on adverse market conditions - a point heretofore overlooked in joint federal-state mine related permit application evaluation. This point, however, is beyond the scope of our review or your ability to resolve.

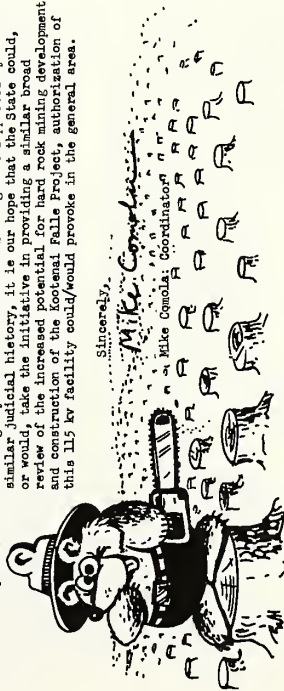
The Department's presentation of hypothetical start-up dates is enlightening. It must be remembered that the Mount Vernon ore-body is the smaller of six (6) similar deposits held by ASARCO within or adjacent to Northern Lights Montana service area, none of which are anywhere advanced as the Mount Vernon project. The prospect of any of these coming on line prior to July 1, 1982 is remote. At least three (3) of the additional ASARCO holdings (Boss Point, Star Gulch and Chicago Peak) could be directly served by extension of the proposed Northern Lights 115 kv facility. In other words, the likelihood of Northern Lights requiring additional generation facilities (such as the Kootenai Falls Dam) to provide their industrial client ASARCO, increases as the entire potential for development is reviewed.

It is our opinion, based upon court decisions dealing with NEPA, that the federal manager, in carrying out the Act, is required to provide the detailed "Statement of Findings" referred to Section 107 of the Act, and that such consideration of effects and opinions outside the agency's actual control. Although not a similar judicial history, it is our hope that the State could, or would, take the initiative in providing a similar broad review of the increased potential for hard rock mining development and construction of the Kootenai Falls Project, authorization of this 115 kv facility could/would provoke in the general area.

Sincerely,

Mike Comella

Mike Comella: Coordinator



Oct. 8, 1978

Cabinet Resource Group

RT: 3

Troy, Mont. 59915

RECEIVED

OCT 13 1978

MT DEPT OF NATURAL
RESOURCES & CONSERVATION

Bob Anderson
Administrator, Energy Div.
DNRC

Dear Bob,

I am writing to you concerning the length of the public comment period on the draft Environmental Impact Statement on Northern Lights, Inc. proposal for a 115 kv Transmission line, to be built in connection with Asarco's proposed Troy Project.

Over half the comment period had passed before any copies of the DEIS reached Troy in the mail. I was assured last summer by Larry Nordell of DNRC that we would be sent a copy when they were available, but I have not yet received one. Our secretary requested 3 copies by mail on Oct. 2nd, and so far these have not come either.

It is simply not right to begin a time period for public comment on a document before the public has access to it. We feel that an extension of at least 15 days is in order.

Sincerely, Bill Martin,
Coordinator

3

I have one other suggestion regarding public input. I think it would be good to begin a public comment period with a meeting to explain what the proposed development is, to answer some of the broader questions about it, and to explain the EIS process. I think this would result in more substantial public input at the end of the comment period, less people frustrated because they can't get answers to their questions, and generally a better rapport between the government and the people.

The questions that I have about this proposal are pretty well covered in chapter 8 of the DEIS. If the Cleaver mine were to go into production after 1982, when there would be a definite ~~link~~ link between the powerhouse and the proposed dam at Roosevelt Falls which would have to be built at the dam. The dam on this line should be made until the date that the mine will open (if at all) is determined.

The desirability of underbuilding the existing distribution line along the ~~proposed~~ proposed route cannot really be determined without knowing the cost of maintenance and pole replacement on the existing line. Northern lights contention that they don't know this is scarcely credible. 46 families would be affected by the higher

4

and more numerous poles and the 10 to 30 ft. increase in right-of-way required by building along the proposed route; only 7, of the DNR western alternative were used. I think this should be the main consideration. Considering all other factors together, I feel the DNR western alternative is still the best route to follow, if this line is to be built at all.

Sincerely,
 Bill Martin
 Rt. 3
 Troy, Mont
 59935

P.S. - It would be helpful if you would include your address in future DEIS's, so that people will know where to send their comments.

Electrical Engineering
System Studies
Power Analysis

Civil Engineering
Sanitary Engineering
Land Surveys

Page 2

Montana DNRC

10/12/78

Robt. E. McLean E. E.
Branch Office
210 Hutton Bldg.
Bozeman, Mo. 59204
509/475-5794

JAMES A. SEWELL & ASSOCIATES

CONSULTING ENGINEERS
NEWPORT, WASHINGTON 99156
509-447-3626

James A. Sewell C.E.
Fellow A.S.C.E.
Newport Office

October 12, 1978

Montana Department of
Natural Resources & Conservation
Energy Planning Division
32 S. Ewing Street
Helena, Montana 59601

Attention: Mr. Robert Anderson

Subject: Proposed 115 KV Transmission Line
From Troy to Mt. Vernon Mine
Draft EIS

Dear Bob:

We wish to make the following comments concerning the draft EIS for the subject transmission line. We still feel that the proposed route is the most advantageous and has the least effect on the environment in that it does not cut a new swath of timber, also there will be places where the right of way will have to be widened. Locating it in a new area would also add additional cost for clearing as well as the cooperative loses the advantage of the up-grading of the present facilities which will have to be rebuilt in the near future. Since using the same route will not necessarily use the same pole locations because of shorter span requirements for the proposed line, the pole locations which bother existing customers along the line can be altered for a lesser effect on their property.

There is much comment concerning the possible cost of the line to the existing REA members. We wish to again reiterate that Asarco is providing all the funds for the construction of the line and that the rate structure for their service will include the cost of purchasing the necessary power, the cost of maintaining the transmission line, the cost of depreciation of the line and a proportionate share of the overhead costs of the cooperative. This means that even with the repayment of the cost of the line over the 20 year period as credits on the power bill, Asarco will be out the interest on their money until the pay-back is made and the Cooperative will have no interest cost. Actually, the costs of service to the present REA customers should be reduced as Asarco will be assuming part of the existing overhead costs. However, this will probably not show up in the rate reduction but will probably defer a rate increase.

To supply the load from the Cabinet Gorge area would require additional length of line unless the line was built through the wilderness area. If this were possible, there would be additional costs in building the line because of the necessary access for construction.

We will be glad to discuss these items further with you or any other thought you might have concerning the line.

Very truly yours,

JAMES A. SEWELL & ASSOCIATES
Consulting Engineers

By James A. Sewell

JAS:mm

cc: Northern Lights
ASARCO
File

APPENDIX D

BONNEVILLE POWER ADMINISTRATION'S NOTICE OF INSUFFICIENCY

Letter from Northern Lights, Inc. August 8, 1968	44
Letter from BPA August 14, 1968	45
Letter from BPA June 24, 1976	46



NORTHERN LIGHTS, Inc.

Wm. T. Norden, General Manager

Congress 3-2153

P O Box 310

Sandpoint, Idaho 83864

August 8, 1968

Mr. Norman Gilchrist, Area Mgr.
Bonneville Power Administration
Room 561, U.S. Courthouse
W. 920 Riverside
Spokane, Washington 99201

Dear Norman:

We have had a tentative request from Bear Creek Mining for electric power service to their mine near Spar Lake, Montana, for approximately 14,000 kilowatts for mining and milling of copper ore. This will be high load factor power.

It will probably be about three years before they will require the power if they go ahead with their plans.

Pursuant to our power contract with you, we would like to request 14,000 kilowatts of power to be served from your 115,000 volt Albeni Falls - Troy transmission line to serve the Bear Creek load.

Sincerely,

NORTHERN LIGHTS, INC.

Wm. T. Norden,
General Manager

WTN:blp

cc: Mr. Robert Coddington

Serving more than 16,000 Idaho, Montana and Washington Residents with Electricity



UNITED STATES
DEPARTMENT OF THE INTERIOR
BONNEVILLE POWER ADMINISTRATION
Spokane Area Office
Room 561, U. S. Court House
West 920 Riverside Avenue
Spokane, Washington 99201

August 14, 1968

Mr. William T. Nordeen, Gen. Mgr.
Northern Lights, Inc.
Post Office Box 310
Sandpoint, Idaho, 83864

Dear Bill:

In response to your letter of August 8, 1968, we have investigated the availability of power for you to serve the proposed 14,000-kv load of the Bear Creek Mining Company for the mining and milling of copper ore. We understand that this would be served from a tap to our 115-kv line near Troy, Montana. You estimate that the power will be required initially in the fall of 1971.

Our current appraisal of loads and resources indicates that power will be available to serve this load. Because of constantly changing conditions, we would urge that a firm commitment for this service be obtained from the Company as soon as possible so that we can reserve the power for this proposed load and make appropriate changes in our power sales contract. We will also need time to budget for any system reinforcements which may be required, and these facilities, of course, are subject to the congressional appropriation process.

BPA does not furnish special transmission or substation facilities for service to this type of load and we understand that you will arrange for these to be built. These facilities will directly affect the operation of the BPA system, so it will be necessary for us to review and approve your plans in advance. A particular requirement is that the step-down transformer be connected delta on the 115-kv side so that it cannot supply current to ground faults on the 115-kv system.

Our transmission system between Grand Coulee and Western Montana will be very heavily loaded in the fall of 1971 and we would like to avoid picking up this new load until after October 1. The completion of the Dvorshak-Hot Springs line in the spring of 1972 will relieve this problem.

Sincerely yours,

R. W. Coddington
R. W. Coddington
Area Power Manager



United States Department of the Interior

BONNEVILLE POWER ADMINISTRATION
P.O. BOX 3621, PORTLAND, OREGON 97208

RECEIVED

JUN 25 1976

JUN 24 1976

THE ADMINISTRATOR

In reply refer to: P

Mr. William T. Nordeen, Gen. Mgr.
Northern Lights, Inc.
P.O. Box 310
Sandpoint, Idaho 83864

Subject: Contract No. 14-03-59197 (Power Sales Contract) - "Notice of Insufficiency"

Dear Mr. Nordeen:

The Bonneville Power Administration has the obligation under the Power Sales Contract to meet the Cooperative's power requirements, subject to limitations included in such contract, unless, pursuant to Section 22 of the General Contract Provisions attached to such contract, Bonneville determines that Bonneville's resources will not be adequate to meet its estimated loads, subject to specific notice requirements.

Bonneville has completed an analysis of the resources it estimates will be available for disposition and its requirements and commitments to supply firm energy in the year July 1, 1983, to June 30, 1984. As a result of this analysis, Bonneville has determined that the firm energy resources available to it will be insufficient in that year to supply in full the Cooperative's firm energy requirements, the firm energy requirements of other preference customers, and Bonneville's obligations to deliver firm energy to its other customers.

Therefore, in accordance with the provisions of the Power Sales Contract, I hereby give notice, effective at 2400 hours on June 30, 1976, that in the year beginning July 1, 1983, and in each year thereafter during the term of the Power Sales Contract, Bonneville's obligation to supply firm energy to the Cooperative will be limited to an allocation, the amount of which will be computed according to the terms of Section 22 of the General Contract Provisions.



Letter to W. T. Nordeen, Northern Lights, Inc., Subject: Notice of Insufficiency - Contract No. 14-03-59197

Bonneville has provided the Cooperative and its other customers with a preliminary forecast dated April 6, 1976, of the Cooperative's allocation based upon then available information. Bonneville will furnish the Cooperative with a new forecast when data is available regarding the Cooperative's 1975-1976 net system firm energy load. From time to time as additional data becomes available, Bonneville will furnish the Cooperative with revised forecasts of its allocation and a final notice of allocation in accordance with such Section 22.

If you have any questions concerning this letter, the disposition of power after the date of insufficiency, or your allocation, please contact your Bonneville Area or District Office.

Sincerely yours,

Ronald Paul Dohel
Administrator

LIST OF REFERENCES

- Federal Power Commission. 1976(February 26). FPC Bulletin 22175.
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- Raptor Research Foundation. 1975. *Suggested Practices for Raptor Protection on Powerlines*. Brigham Young University: Provo, UT.
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- Rural Electrification Administraton. 1976(July). REA Bulletin 62-5
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- U.S. Department of Agriculture (Forest Service) and Montana Department of State Lands. 1978b. *Final Environmental Impact Statement: Proposed Plan of Mining and Reclamation, Troy Project, ASARCO, Inc., Lincoln County, Montana*. Helena, MT.

MONTANA
DEPARTMENT OF NATURAL RESOURCES
& CONSERVATION
Helena, Montana

